MEDICAL LICENSURE IN CALIFORNIA

TWENTY YEARS AGO AND TODAY

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IN a recent discussion of the economic problems surrounding the practice of medicine, the editor of CALIFORNIA AND WESTERN MEDICINE suggested that the writer prepare a brief paper comparing the status of medical education and licensure of twenty years ago with that of today.

NUMBER OF MEDICAL SCHOOLS

The report of the Council on Medical Education of the American Medical Association, published August 16, 1930, shows eighty-seven acceptable medical schools in the United States, as compared with 152 actively engaged in medical teaching some twenty years ago. In 1930 the eighty-seven acceptable schools in the United States were educating 21,597 students, said to be "the largest enrollment since 1909 . . . " Since 1919 there has been an average increase in enrollment of 423 students each year. It is interesting to note that 70 per cent of all the medical graduates in 1930 held collegiate degrees, as compared with only 15.3 in 1910.

COST OF MEDICAL EDUCATION

Medical education during the past twenty years has progressively developed, both in cost and duration of course of instruction. Fees have mounted from an average of $118 annual tuition in 1910 to $307 in 1930, with 27.6 per cent of the medical colleges requiring an annual tuition fee of from $350 to $450.

Significant is the comment made by the Commission on Medical Education in its 1929 report: "The present cost of medical training to the student, in both time and financial outlay, is not without an important sociological bearing. The study of medicine is becoming increasingly difficult for those of moderate circumstances, from which group of the population many of our great physicians have come. The increasing tuition charges in many schools, however, are offset by many forms of scholarships and fellowships . . . . "

STATE BOARD REQUIREMENTS

State Board requirements, as reflected in the various State Medical Practice Acts, have not kept pace with advancement in medical education. The 1930 records show Wyoming to be the only state that does not require a showing of preliminary education. Delaware, Missouri, Nebraska and Nevada still maintain the comparatively obsolete preliminary education requirement of a four-year high school, whereas California, Connecticut and Pennsylvania laws demand only one year premedical college work. The Medical Practice Acts of thirty-nine states demand two years of premedical college work. Although only thirteen medical colleges require a one-year internship in order to obtain the medical degree, sixteen medical examining boards demand a one-year internship of applicants for a license to practice medicine.

PROPORTION OF PHYSICIANS TO POPULATION

It is interesting to learn that the United States has a larger supply of physicians per capita than any other country, as shown in the 1930 report of the Council on Medical Education of the American Medical Association, which lists 126.6 physicians per 200,000.

The 1910 census showed California's population as 2,377,549, with 5353 licensed physicians and surgeons, of whom 2385 were members of the state medical society. With a population of 5,677,251, California is credited in the 1931 American Medical Association directory as harboring 10,109 physicians and surgeons; however, the 1931 records of the Board of Medical Examiners show only 8662 graduates of medical schools actively engaged in the practice of medicine and surgery in our state. This discrepancy of 1447 additional physicians and surgeons listed in the 1931 American Medical Association directory comprises both unlicensed physicians from other states residing in California and 816 graduates of osteopathic schools licensed as physicians and surgeons in the state of California, under jurisdiction of the Board of Osteopathic Examiners.

Some 5019 of California's physicians and surgeons are listed as members of the California Medical Association. It is evident that both California's licensed medical college graduates and the membership in the California Medical Association has kept pace with California's increase in population.

CALIFORNIA LICENTIATES IN SECTARIAN GROUPS

In discussing our economic problem in California, we must keep in mind those licensed by the Board of Osteopathic Examiners and the Board of Chiropractic Examiners, the former, according to the 1931 record, totaling 1480 licentiates and the latter totaling approximately 2747.

WHAT PRESENT DAY MEDICAL STUDENT FACES

Brave indeed is the student who decides to become a medical practitioner after contemplation of the increased cost of medical education, the added time required to complete the course, the curtailment of the sphere of practice through modern preventive medicine, now rapidly lessening the heretofore prevalent diseases, the inroads of various nursing services, hospital associations, health centers, welfare organizations and a host of other lay activities rapidly assuming the prerogative of treatment of the sick and afflicted.

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DISCUSSION

ON PAPERS OF DOCTORS GRAVES, CROSBY, BROWN, FRENCH, REYNOLDS, POMEROY, KELLY, AND PINKHAM

LYELL CARY KINNEY, M. D. (1831 Fourth Street, San Diego).—This symposium on medical economics, consisting of the papers presented at the San Francisco meeting, is a complete and accurate survey. We should congratulate these authors on the keen analysis and the clear, forceful statement that characterizes this presentation and we should appreciate the vast amount of investigation upon which it is based. The spirit of optimism that flows through these papers

is most encouraging. The danger of an attitude of indifference, of laissez-faire, or of "static defense" only emphasizes the need for efficient organization and constructive effort. Throughout is the promise that the California Medical Association can supply the need of adequate medical care for all classes and can meet the requirements of preventive medicine.

Doctors Graves, Crosby, Brown, and French have each presented the need for a bureau of public relations in charge of a full-time highly trained executive. Each of them has pointed out as a major problem the distribution of medical costs on an insurance basis. Therefore this bureau should have liaison with the best actuarial experts and the foremost insurance leaders in the country. It will come within the province of this bureau to apply to our California problems the findings of the national Committee on the Costs of Medical Care and of other national committees and economic foundations. The scope would include coöperation with our component county societies in the study and care of the needs peculiar to each community. The bureau could assist the county societies in developing definite policies in public relations and could stimulate coöperation in public health and social service activities. The importance of such a bureau cannot be overestimated. As Dr. E. Starr Judd, president of the American Medical Association, stated in regard to the similar activity of the American Medical Association: "This bureau must have the best man-power that can be obtained."

Our standing committees of the California Medical Association are giving generously of time and effort in their investigations and work for our Association, but they need the coöperation of a full-time efficient bureau if this great organization is to meet its obligations in the prevention of disease and the distribution of adequate medical care.

The California Medical Association should weigh seriously Doctor Crosby's suggestion of a Chair of Medical Economics in each of our medical colleges. It will aid materially in the solution of our problems if the future graduates in medicine are thoroughly acquainted with the social, economic and business phases of medical practice.

It is interesting that one author has singled out all laboratory and x-ray work, the treatment of allergy and syphilis, as the factors of medicine that should be socialized. He contrasts these with "the skill, training, and experience of the physician and his ability to handle the case." It would be just as logical to include all minor surgery, normal deliveries, and routine nose and throat treatments in this group. There is certainly no phase of medicine that requires greater clinical experience or more dependable medical and surgical judgment than any one of these four which he has chosen to place under government control. This sacrifice to the gods would not stem the tide, and certainly would not make for better medicine or more adequate medical care. However, a careful evaluation of our methods and a searching self-appraisal of our relations with the public are necessary if the profession is to adjust itself to modern conditions.

RODNEY YOELL, M. D. (490 Post Street, San Francisco).—The group of articles published in this number of CALIFORNIA AND WESTERN MEDICINE is significant in that it demonstrates to the medical profession recognition of the fact that some change in the present system of the practice of medicine is imminent.

Whether one takes a conservative view with Doctor Graves, or is willing to step into at least a tepid communism with Doctor Reynolds, or else see, mind to mind, with the "coöperative social urge" of Doctor Brown, is a matter of some preference and considerable choice; but that the inevitability of change in the present system is apparent should be patent to all.

It would seem to the writer that three definite factors have to be considered which, even in spite of the magnitude of the problem, loom large and distinct from the sea surface of theories, truths, and half-truths which float about their bases:

First: A change will come inevitably, due to the economic evolution in this country similar to the industrial revolution in Europe of some sixty to seventy years ago. This change will be expressed by laws regulating medical service and under these laws the profession must work and develop.

Second: This evolution will tend to generate laws under which lay domination will be forced upon the profession. If, however, the profession be wise, it can mould these laws into a form more in consonance with its own desires and, because of the inherent technical knowledge possessed by the profession on this subject, it can and should develop these laws to the best interests of the public and without damaging itself.

Third: The endeavor to meet the cost of health by appropriate legislation will follow either one of two forms: that is (1) a direct state aid, or a subsidy in some form from governmental resources; or (2) the much more preferable instrument of insurance can be used in this field, as it has been applied in alleviating fire, theft, and damage losses.

We must recognize from all available data that practically only 25 per cent of the total cost of illness is paid to the profession. To curtail the cost in this direction, therefore, bespeaks for a definite lowering of the economic and social standards of the members of the medical profession, and should be fought persistently, logically, and intensely.

The fact that the health-cost problem lies not in this sphere should be clearly emphasized, and it should be, furthermore, demonstrated that the basic maintenance rate, namely, *the rate at which a patient can be maintained* even before the healing agencies are brought to his aid, is the field for our most intense inquiry. These items of purely animal needs, such as food, housing, heat and sanitation, apply to the well equally with the sick and should not be written into inquiries of health cost matters as items of purely medical expense. "Maintenance rate" is one item, the cost of "healing agencies" another. To supply the former is definitely a sociological problem and the mechanics of meeting their costs must be framed by laws sanely and soundly drawn.

To justify active participation by the state or its agencies in furnishing basic cost funds, one must certainly develop a social doctrine not only new to this country, but indeed one that heretofore has been held to be the antithesis of our at present accepted basic political philosophy.

It would mean because a man is ill he could by right look to the state to furnish and finance material which admittedly he has no right to during his well or health periods. In other words, sickness compels the state to furnish food, clothing, housing, etc., to a citizen from its own resources irrespective of whether the man can, has been able, or could be able to furnish the cost of these items himself.

One feels that even the slightest wedge which is permitted to enter in the application of this theory, whether as to the costs of laboratories, x-ray examinations, et cetera, will ultimately insinuate itself so far into our political system as to cleave it entirely. England's "dole system" exemplifies this.

Therefore let medical men be guarded before they urge this procedure under misguided and seemingly plausible statements of "state aid at cost" or "the duties of the profession to furnish health protection" at the lowest possible cost figure.

The right to practice is a "property right," and if we neglect to insist on its maintenance as such we are in the same position as a merchant who, knowing that food control is somewhat a matter of governmental concern, would tolerate the furnishing of food materials free or at cost by the state to individuals who in the recognized scheme of things should be able to buy and pay for such food materials themselves.

The other alternative, namely, that of social insurance, eliminates these difficulties and would seem to

be the logical development of our political philosophy. Far from placing our citizenry on the same level as a European peasantry, it would furnish adequate funds to meet the cost of illness, *and raise these same funds by private effort, but under governmental sanction.* Each individual, unless he be absolutely indigent, would be required to allocate certain of his resources against the inevitable period of illness. These funds, utilized as insurance, would and could unquestionably care for the greater percentages of illness striking the greatest number of people. The entire white collar class, about which so many crocodile tears have been shed, could in this fashion fend for itself and maintain its respectability without requiring the medical profession to surrender its independence and place itself under what would unquestionably be a political bureaucratic system of lay control of the practice of medicine.

Several funds are now so working. The Endicott-Johnson plan, for example, runs for about $21.50 per year per family and this would seem to be adequate to furnish the essentials for meeting the cost of health. Actuarial data should be gathered on this question with the end in view that personal insurance carried by the individual under sanction and supervision by the state should be the goal to be achieved.

Compulsory insurance has an ominous sound in the use of the word "compulsory," but the essence of government lies in its very ability to compel individual action, provided such authority has previously been given by its component members.

Surely the state could require merely the most commonplace type of forethought as a social duty obligatory on its citizens, rather than split our social structure and place an entire profession and its rights under the domination of lay political appointees.

These matters require the closest scrutiny. General statements of the happy condition of Europeans under native systems should be judged by actual personal observation; after which much of their glamour is lost. Doctor Crosby does well to call attention to Denmark's reversal to the old type of practice, and it is well known that in England the average person jumps his panel as soon as he is financially able to seek medical aid for himself.

No apologies are needed for the profession's attitude toward the public. In the main our banners are clean and unsullied. We should continue to carry them so, but carry them we must into fields of battle which will be hotly contested. False issues and the siren songs of plausible theories are legion. We must recognize the basic principles from which we draw our strength and fight to maintain these at all costs.

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John C. Ruddock, M. D. (1930 Wilshire Boulevard, Los Angeles).—The stupendous task as outlined by Dr. John H. Graves in his report brings out the fact of the various ramifications of any problem dealing with medical economics. To note the complexity of the subject as evidenced by seven different papers, dealing with seven different phases of the same subject, brings to mind the famous motto of a Greek philosopher, "There is no panacea for all ills."

Dr. Rexwald Brown has hinted in his last paragraph at a phase that has a very direct bearing on the solution of the problem of medical economics; and it is the biggest argument against state medicine, medical services, hospital organizations, health insurance, and like activities. To adopt a major premise that the services of all men practicing medicine are the same is, unfortunately, not true. Taking for granted that the medical training of all physicians is exactly the same, there is, however, a marked difference in (1) reasoning power; (2) personality; (3) tact; (4) industry; (5) progressiveness; (6) sympathy; and (7) kindness.

These cardinal virtues make the successful practitioner in medicine.

The competency and equality of medical service is not assured to the people under the many divergent laws enacted throughout the United States and the personnel making up the various licensing boards. To a great mass of citizens the term "doctor," whether he be regular, osteopath, chiropractor, optometrist, physiotherapist, or cultist, is the same. Their judgment and opinion carries equal weight.

Brains cannot be standardized, which we as medical men should know. If this were possible, then it would be simple to adopt a state-wide standard fee schedule or adopt a state-wide socialized medical program. The art and the practice of medicine always has been and must always be individualistic if the "service to the patient" is paramount.

CIRCULATORY CHANGES DURING SPINAL ANESTHESIA*

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A COMPREHENSIVE study of the factors involved in the circulatory depression accompanying spinal anesthesia has been retarded by the generally accepted belief that visceral vasodilatation resulting from splanchnic nerve paralysis is responsible for the major part of the syndrome. Some of the recorded advantages of spinal anesthesia are "contracted viscera," "absence of bleeding from gastrointestinal operations," "bloodless Cesarean sections," and comment as to the anemic appearance of the viscera during laparotomy. If the altered distribution of blood to the splanchnic area were responsible for such a profound fall in blood pressure as sometimes accompanies spinal anesthesia, one should have no difficulty in demonstrating a greater quantity of blood in the viscera.

It is interesting that very little attempt is made to correlate these paradoxical statements, especially in view of the fact that a subarachnoid block as high as the nipple line involves other structures than the region innervated by the splanchnic nerves. Physiologists have long recognized that the normal tone and contractility of skeletal muscle play a major rôle in the movements of capillary and venous blood. Functional severance of the motor nerves to over half the skeletal muscles must at least be considered a factor.

A secondary if not so important a factor in the control of tone of blood vessel musculature, is the acid-base balance of the blood. Increase in the H-ion concentration is known definitely to produce a lowered tone of vascular muscle. That this increase occurs in spinal anesthesia will be made evident later in this paper.

An additional factor which has been largely overlooked is intercostal nerve paralysis. In view of evidence presented before and confirmed in the present paper, it is one of prime importance. Gray and Parsons,[1] in a clinical study of the subject published in 1912, attribute the "main fall" of blood pressure to "thoracic paralysis

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* Preliminary report. Extended studies will be reported elsewhere. Read before the general meeting of the California Medical Association, at the sixtieth annual session, San Francisco, April 27-30, 1931.